



Jose Carlos Borrero. Ph.D.

Nationality: USA, New Zealand

Profession: Oceanographic Consultant

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PRESENT POSITIONS:

- Director, Senior Consultant, eCoast Ltd.
- Adjunct Assistant Research Professor, University of Southern California, Los Angeles, CA, USA

SPECIALISATION:

Coastal engineering, processes, oceanography and hazards; tsunami hazards and analysis; hydrodynamic numerical modelling; design of coastal structures and impact assessment, multi-purpose reefs, environmental impact assessment, expert witness.

YEARS OF EXPERIENCE:

- 20 years (consulting since 1998)

KEY QUALIFICATIONS:

- Ph.D. Ocean and Coastal Engineering, University of Southern California, August 2002
- M.S. Ocean and Coastal Engineering, University of Southern California, May 1997
- B.S. Civil and Environmental Engineering, University of Southern California, December 1995
- B.S. Journalism, Telecommunications Production, University of Florida, May 1993

PROFESSIONAL MEMBERSHIPS:

- Member Engineering New Zealand
- Member New Zealand Coastal Society (Technical Group of Engineering New Zealand)
- Member Geoscience Society of New Zealand.
- Associate Member World Association for Waterborne Transport Infrastructure (PIANC)
- Member of American Geophysical Union (AGU)
- Technical Advisor for the Surfbreak Protection Society (NZ) and Save the Waves Coalition

WORK HISTORY

2012-Present

Director/Senior Consultant, eCoast Ltd.

2010-2012

Senior Consultant, ASR Ltd - Marine Consulting and Research

2006-2009

Manager, Coastal Science Group, ASR Ltd - Marine Consulting and Research

2006-Present

Adjunct Assistant Professor, University of Southern California.

SUMMARY OF PROFESSIONAL OUTPUT

- 54 published articles in research journals (12 lead author) since 1997.
- 70+ technical and consulting reports since 2006
- 12 post-tsunami reconnaissance surveys (4 as team leader/principal scientist)
- 6 field investigations of near-shore hydrodynamics and/or instrument deployment
- 2 large scale hydraulic physical laboratory experiments
- 5 organized or co-organized international conferences
- 4 co-editorship conference proceedings volume

PUBLICATIONS SUMMARY

TECHNICAL AND CONSULTING REPORTS (incomplete)

IN PROGRESS

2019

- Borrero, J.** and O'Neill, S. (2018) Probabilistic Tsunami Inundation Assessment for the Far Eastern Bay of Plenty, Report in preparation for Bay of Plenty Regional Council. July 2019
- Borrero, J.C.** (2019) Assessment of Tsunami Hazards in Northland Maritime Facilities. Project for New Zealand Ministry of Civil Defence and Emergency Management and Northland Regional Council.
- Borrero, J.C.**, Lynett, P. and Son. S. (2019) Assessment of tsunami hazard in the Sunda Strait, Indonesia. Prepared for Arup Consulting, London, United Kingdom.
- Borrero, J.C.**, Mead, S.T. and O'Neill, S. (2019) Coastal Processes and Hazards Assessment, Lelepa Island, Vanuatu, Report prepared for Downer Engineering.
- Borrero, J.** (2019) Tsunami Inundation Assessment for the Firth of Thames, New Zealand, Report prepared for Waikato Regional Council, Feb 2019.
- Greer, S.D. and **Borrero, J.C.** (2019) Investigation of Factors Influencing the Rates of Input, Beaching and Re- Suspension of Plastic Debris in the Marine Environment – Project for The Ocean Clean-up Project Foundation, Netherlands.
- Borrero, J.C.**, Lynett, P. and Son. S. (2019) Assessment of landslide tsunami hazard in Kitimat Arm, British Columbia. Report Prepared for Ausenco Engineers, Vancouver, BC, Canada.

2018

- Borrero, J.C.** and Mead S. (2018) Assessment of Water Levels on Lake Taupo, New Zealand. Project for Waikato Regional Council, September 2018
- Greer, D., O'Neill, S., **Borrero, J.**, (2018), Dynamics of Nearshore Plastic Pollution Part I: Literature and Data Review, Prepared for The Ocean Clean Up
- Borrero, J.C.** and Bosserelle, C (2018) Tsunami Inundation Assessment for the Gisborne District Council, Prepared for Gisborne District Council, June 2018.
- Borrero, J.** and O'Neill, S. (2018) Probabilistic Tsunami Inundation Assessment for the Eastern Bay of Plenty, Report prepared for Bay of Plenty Regional Council, June 2018.

2017

- Borrero, J.** (2017) North East Point Mahé Island: Community Consultation on the Status of the Reef and Beach and Identification of Next Steps for Effective Management, Report prepared for UNDP Seychelles, December 2017.
- Borrero, J.** (2017) Establishing a Real-Time Tsunami Hazard Assessment Tool for the Canterbury Region, New Zealand, Report prepared for Environment Canterbury, September 2017.
- O'Neill, S. McIntosh, R., **Borrero, J.C.**, and Mead, S.T., Hydrodynamic Modelling of Northlands CFHZ's. Prepared for Northland Regional Council, October 2017.
- Borrero, J.** (2017) ComMIT modelling for Real-time Tsunami Forecasting in New Zealand, Report prepared for GNS Science, New Zealand, September 2017.
- Borrero, J.** and O'Neill, S. (2017) Probabilistic Tsunami Inundation Assessment for the Western Bay of Plenty, Report prepared for Bay of Plenty Regional Council, July 2017.
- Borrero, J.** (2017) Response to Concerns Regarding the Numerical Modelling of Tsunami Inundation at Whitianga Area School, Report prepared for Waikato Regional Council, May 2017.

2016

- Atkin, E., S. T. Mead, J. C. **Borrero**, D. J. Phillips and S. O'Neill, 2016. *Development of the Castlecliff Coastal Management Strategy*. Prepared for Whanganui District Council, July 2016.
- Borrero, J.C.**, Atkin, A., Greer, D., O'Neill, S. and Mead S. (2016) Coastal Processes Assessment of North East Point, Mahé, Seychelles, Prepared for UNDP Seychelles, November 2016.
- Borrero, J.C.** (2016) Numerical modelling of tsunami inundation in Whitianga and Mercury Bay, New Zealand, Prepared for Waikato Regional Council, October 2016.

- Borrero, J.C.** (2016) Hydrodynamic Modelling of Tsunami Waves at Abu Dhabi Offshore Oil Fields, Prepared for Ove Arup and Partners, London, September 2016.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Mon Choisy Beach, Republic of Mauritius: Final Design Report, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Rivière des Galets, Republic of Mauritius: Final Design Report, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.

2015

- Borrero, J.C.** (2015) Numerical modelling of tsunami effects at Port Waikato, Raglan and Aotea Waikato West Coast, New Zealand, Prepared for Waikato Regional Council, December 2015.
- Borrero, J.C.** (2015) Numerical modelling of tsunami inundation along the Kennedy Bay to Opito Bay coast, Coromandel Peninsula, New Zealand, Prepared for Waikato Regional Council, December 2015.
- Borrero, J.C.** and Goring, D.G. (2015) Real-time Modeling and Assessment of Tsunami Waves in Lyttelton Port Generated by the September 17, 2015 Illapel Earthquake in Central Chile, Prepared for Lyttelton Port Company, September 20, 2015.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Mon Choisy Beach, Republic of Mauritius: Detailed Technical Assessment, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Rivière des Galets, Republic of Mauritius: Detailed Technical Assessment, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Mon Choisy Beach, Republic of Mauritius: Options for Adaptation, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.**, Mead, S.T., Clarke, M., Klaus, R. and Persand, S. (2015) Coastal Adaptation Measures for Rivière des Galets, Republic of Mauritius: Options for Adaptation, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Clarke, M., **Borrero, J.C.**, Mead, S.T., , Klaus, R. and Persand, S. (2015) An Economic Valuation and Cost Benefit Analysis of Adaptation and Enhanced Ecosystem Resilience for Mon Choisy Beach, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Clarke, M., **Borrero, J.C.**, Mead, S.T., Klaus, R. and Persand, S. (2015) Cost Benefit Analysis for Adapting to Sea Level Rise: Protection or Managed Retreat in Rivière des Galets, Prepared for Ministry of Environment, Sustainable Development, Disaster and Beach Management.
- Borrero, J.C.** (2014) Numerical modeling of Tsunami Inundation at Port Charles, Coromandel Peninsula, New Zealand, Prepared for Waikato Regional Council, January 2015.

2014

- Mead, S. T., J. C. **Borrero**, D. Greer and D. Phillips, 2014. *Woja Causeway Project: Coastal Processes and Feasibility Study*. Report prepared for the Secretariat of Pacific Communities (SPC), specifically the Global Climate Change Alliance: Pacific Small Island States (GCCA:PSIS), February 2014.
- Borrero, J.C.** (2014) Numerical modeling of Tsunami Inundation at Whangamata, Whiritoa and Port Charles, Coromandel Peninsula, New Zealand, Prepared for Waikato Regional Council, August 2014.
- Borrero, J.C.** and Goring, D.G. (2014) Real-time Modeling and Assessment of Tsunami Waves in Lyttelton Port Generated by the April 1, 2014 Earthquake in Northern Chile, Prepared for Lyttelton Port Company, April 12, 2014.
- Borrero, J.C.** (2014) Development of a Real-Time tsunami inundation assessment tool for Auckland, New Zealand, prepared for Auckland Council.
- Borrero, J.C.** (2014) Numerical Modelling of Tsunami Waves at Lelu Island, British Columbia, prepared for Ove Arup and Partners, London.
- Borrero, J.C.** (2014) Numerical Modelling of Tsunami Waves at Batangas Bay, Philippines, prepared for Ove Arup and Partners, London.
- Morris, B. and **Borrero, J.** (2014) Inundation of Whitianga town during the 1960 Chilean tsunami, Waikato Regional Council Technical Report 2014/65.

2013

- Borrero, J.C.**, Goring, D.G., Greer, S.D., Power, W.L. and Barberopoulou, A. (2013) Decision Making Tools for the Real-Time Assessment of Far-Field Tsunami Hazards in New Zealand Ports and Harbours Part 1: Background Information and Preliminary Analysis. Prepared for New Zealand Ministry of Business Innovation and Employment, December 20, 2013.
- Borrero, J.C.**, Titov, V.V. and Synolakis, C.E. Numerical Modeling of Tsunami Effects in Southern California from a Hypothetical M9.1 Earthquake near the Alaska Peninsula, in Ross, S.L., and Jones, L.M., eds., The SAFRR (Science Application for Risk Reduction) Tsunami Scenario: U.S. Geological Survey Open-File Report 2013-1170, 136 p., <http://pubs.usgs.gov/of/2013/1170/d/>.
- Borrero, J.C.** and Mead, S.T. (2013) Water Levels on Lake Taupo and Implications on Foreshore Erosion, Prepared for Waikato Regional Council, Hamilton, New Zealand.
- Borrero, J.C.** (2013) Tsunami Hazard Assessment for Talara, Peru, Prepared for Langan Engineers.
- Borrero, J.C.** (2013) Modelling a Large Tsunamigenic Earthquake Source off the Gorrington Bank for Tsunami Impact at the Wylfa NPP, Wales, Prepared for Ove Arup and Partners, London.

2012

- Borrero, J.C.** (2012) Tsunami Inundation Modelling: Whitianga, Tairua and Pauanui, Prepared for Waikato Regional Council, Hamilton, New Zealand, ISSN 2230-4363.
- Lynett, P.J., **Borrero, J.C.** and Sangyoung, S. (2012) Numerical Simulations of Maritime Tsunami Hazards in Crescent City, CA, Prepared for California Emergency Management Agency.
- Borrero, J.C.** and Greer, S.D. (2012) Spectral Characteristics of Numerically Modelled Tsunami Waves at Khor Fakkan, Fujairah, UAE, UAE, prepared for Ove Arup and Partners, London.
- Borrero, J.C.** (2012) Tsunami Hazard Assessment for A Site in the UAE from Earthquakes along the Makran Subduction Zone, Prepared for Ove Arup and Associates, London.
- Borrero, J.C.** (2012) Numerical Modelling of Tsunami Waves at Kakinada, India, prepared for Ove Arup and Partners, London.
- Borrero, J.C. (ed.)** (2012) Field Survey Report of Tsunami Effects Caused by the August, 2012 Offshore El Salvador Earthquake, Prepared for United Nations Educational, Scientific and Cultural Organization (UNESCO) International Tsunami Information Center (ITIC), Honolulu, HI, 107 pp.
- Borrero, J.C.** (2012) Tsunami Inundation Modelling for Omaezaki Port, Japan, Prepared for Chevron USA, Richmond, CA.
- Borrero, J.C.** (2012) Tsunami Hazard Analysis for Batangas Bay, Philippines, Prepared for Ove Arup and Associates, London, UK.
- Borrero, J.C.**, Atkin, E., Frazerhurst, J., Grant, D., Lebreton, L. (2012) New Kuta Beach Stabilization: Analysis and Assessment of Shore Protection and Coastal Management Options, , prepared for PT Bali Pecatu Graha.
- Borrero, J.C.**, Atkin, E., Frazerhurst, J., Grant, D., Lebreton, L. (2012) New Kuta Beach Stabilization, Field Data Analysis and Hydrodynamic Numerical Modelling, prepared for PT Bali Pecatu Graha.
- Borrero, J.C.**, Atkin, E., Frazerhurst, J., Grant, D., Lebreton, L. (2012) New Kuta Beach Stabilization: Field Data Collection and Preliminary Numerical Modelling, prepared for PT Bali Pecatu Graha.

2011

- Borrero, J.C.**, Lebreton, L.C.-M, Greer, S.D., Mueller, H. and Csato, C. (2011) Plastic Pollution in the World Ocean: A Research Study into the Origin, Transport and Distribution of Floating Debris, Prepared for the Sea•thos Foundation, Venice, CA.
- Borrero, J.C.** (2011) Local Tsunami Source Models for Northern Chile, Prepared for Golder and Associates, Irvine CA.
- Borrero, J.C.** and S. D. Greer, (2011) Wheatstone LNG Terminal Tsunami Hazard Study, Prepared for Chevron Australia Pty. Ltd.
- Mead S.T., **Borrero, J.C.**, Grant, D., Lebreton, L., and Moores, A. (2011) Design of a Submerged Reef for Coastal Protection, Prepared for US Army Corps of Engineers, National Erosion Control Development and Demonstration Program, Ventura County Demonstration Site.
- Borrero, J.C.** and Grant, D. (2011) Oceanographic Analysis of Beran Island, Ainglaplap Atoll, Republic of the Marshall Islands, Prepared for B.V. Resorts LLC

Borrero, J.C., Lebreton, L., Greer, S.D., Csato, C., Mueller, H. (2011) Plastic Pollution in the World Ocean, A research study in to the origin, transport and distribution of floating debris. Prepared for the Sea*thos Foundation, Venice Beach, CA.

Borrero, J.C., (2011) Review of WYB0004 Seismic Hazard Assessment: Stage 2 Interim Tsunami Hazard Assessment Report, Prepared for Arup, London.

2010

Borrero, J.C., (2010) Borth Reef: Physical Modelling Study of Coastal Protection and Surfability, Prepared for Royal Haskoning, Peterborough, UK

Borrero, J.C., Lebreton, L., Oldman, J. (2010), Assessment of Submerged Reefs for Coastal Protection in Port Phillip Bay, Report prepared for the Department of Sustainability and Environment, Victoria, Australia

Borrero, J.C., Lebreton, L., Mead, S. and Frazerhurst, J. (2010), “Re-Imagining the Folkestone Shore” Report prepared for Folkestone Re-Development Group. February, 2010.

Mead, S., **Borrero, J.C.**, Lebreton, L., Grant, D., “Scoping Study of the New Zealand West Coast Physical Marine Environment”, Report Prepared for Golder and Associates, New Zealand.

Borrero, J. C., and S. T. Mead, 2010. *Borth Reef: Surfing Assessment Study*. Prepared for Ceredigion County Council, August 2010

2009

Borrero, J.C., Mead, S., Campbell, A.(2009) “Borth Multipurpose Reef: Final Design Note” Prepared for Royal Haskoning, December 2009.

Borrero, J.C. and Mead, S.T. (2009) “La Roche Percée: Review of a Proposed Beach Renourishment Plan” Prepared for CAPSE-Nord, Noumea, April 2009.

Borrero, J.C., Mead, S.T and LeBreton, L. (2009) “La Roche Percée [New Caledonia]: Hydrodynamic Analysis of the Littoral Environment, Design of a Multi-Purpose Erosion Control Structure” Prepared for CAPSE-Nord, Noumea, March 2009.

Borrero, J.C., Harrison, S. and Mead, T. (2009) Uitoé Bay, New Caledonia Field Data Collection and Hydrodynamic Analysis of Proposed Channel Configurations, Prepared for CAPSE-Nord, Noumea, May 2009

Borrero, J.C. (2009) Stability Assessment for Submerged Reef Breakwaters constructed from Large Sand Filled Geotextile Containers.

Borrero, J.C., Mead, T., Harrison, S. (2009) Weather and Sea Conditions Leading Up to the Grounding of the San Cuvier 27th July 2008

Frazerhurst, J. **Borrero, J.C.**, Mead S., Harrison, S. (2009) Tidal and Wave Energy Resource Study – Victoria. Prepared for: SKM Consultants, July 2009.

Mead S. T., J. C. **Borrero** and S. Harrison, 2009. *Design and Assessment of Physical Effects of Multi-Purpose Reefs for Beach Sand Retention at Orewa Beach*. Orewa Beach Reef Charitable Trust/Rodney District Council, August, 2009.

Borrero, J. C., and S. T. Mead, 2009. *La Roche Percée: Optimized Design of a Multi-Purpose Erosion Control Structure*. Prepared for Capse Nord, July 2009.

2008

Black, K. P., .S. T. Mead, J. C. **Borrero** and J. Frazerhurst, 2008. *Development of a Clean Sandy Beach and Marine Infrastructure for Cornish Bay Resort, Mauritius*. Report prepared for Arup Sigma, October 2008.

Mead, S. T., and J. C. **Borrero**, 2008. *Bathymetry Survey of Tauranga Harbour*. Report for URS New Zealand Ltd, August 2008.

Harrison, S., **Borrero, J.C.** and Black, K.P. (2008) “Extreme Water Levels at the Powlett River Mouth” Prepared for GHD, Australia, July 2008.

Borrero, J. C., Mead, S.T., Black, K.T., Bosserelle, C. and Healy, T. (2008). “Matakana Island [New Zealand] Access Numerical Modelling & Assessment” Prepared for the Pritchard Group, June 2008.

Borrero, J.C. (2008) “Historical Assessment of Tsunamis Affecting the Southern Coast of the Dominican Republic” Prepared for Sandwell Engineering, Vancouver, Canada, May 2008.

Borrero, J. C., S. T. Mead, K. P. Black and C. Bosserelle, 2008. *Matakana Island Numerical Modelling*. Prepared for the Pritchard Group, April 2008.

Mead, S. T., Black, K.P., **Borrero, J.C.**, Bosserelle, C. and Bou, A. (2008) "Design and Assessment of Physical Effects of Multi-Purpose Reef for Beach Sand Retention at Orewa Beach [New Zealand]" Prepared for the Orewa Beach Reef Trust and Rodney District Council, March 2008.

2007

Borrero, J.C. and Mead, S.T. (2007) "Channel Sedimentation at Gisborne prior to the Grounding of the Jodi F. Millennium Prepared for TT Club c/- Langley Twigg Lawyers, October 2007.

Borrero, J. C., Mead, S.T., Black, K.T. and Bosserelle, C. (2007). "Matakana Island [New Zealand] Data Collection Report" Prepared for the Pritchard Group, September 2007.

Mead S. T., **J. C. Borrero**, K. P. Black and J. Frazerhurst, (2006) "Multipurpose Reefs for Port Elizabeth South Africa: Detailed Design Report for Multipurpose Reefs at 4 locations in Port Elizabeth, South Africa" Prepared for Africoast Engineers, November 2007.

Black, K.P., Mathew, J., and **Borrero, J.C.** (2007) "Southern Pipeline Estuarine and Hydrodynamic Physical Process Assessments" prepared for URS, New Zealand and Tauranga City Council, August 2007.

Mead, S.T., **Borrero, J.C.**, Black, K.P. and Frazerhurst, J. (2007) "Investigations into the Development of Multi-Purpose Reefs at Las Rosadas [Mexico] for Beach Access and Amenity Enhancement" Prepared for Costa Chamela Corporation, May 2007.

Borrero, J.C., Raichlen F., and Yeh, H., (2007) "Third Party Review of Samoa Town (Humboldt County, CA) Master Plan Tsunami Vulnerability Report", prepared for GeoEngineers, February 2007.

2006

Mead, S. T., J. C. **Borrero**, K. P. Black and J. Frazerhurst, 2006. *Multi-Purpose Reefs at Wells Estate Beach: Feasibility Study*. Report Prepared for AfriCoast Engineers, November 2006.

Borrero, J. C., S. T. Mead, K. P. Black and J. Frazerhurst, 2006. *Multi-Purpose Reefs at Pollok Beach: Feasibility Study*. Report Prepared for AfriCoast Engineers, September 2006.

Haggitt T. and S. T., Mead, 2006. *Te Whanganui-a-Hei Marine Reserve Biological Monitoring Programme: May-June 2006 Survey*. Prepared for the Department of Conservation, Waikato Conservancy, August 2006.

Borrero, J. C., Mead, S. T., Black, K. P. and Frazerhurst, J. (2006) "Feasibility and Design Study for a Multi-Purpose Reef in Long Branch, New Jersey" Prepared for Surfers' Environmental Alliance and the State of New Jersey Department of Environmental Protection, July 2006.

Mead, S. T., Black, K. P., **Borrero, J.C.**, Frazerhurst, J., Anderson, D., Phillips, D.J. and Kramer, M (2006). "St Francis Bay Beach Project: Feasibility Study. Investigations into the Application of Multi-Purpose Reefs at St Francis Beach for Coastal Protection and Amenity Enhancement." Prepared for the St Francis Bay Beach Reef Trust, June 2006.

Borrero, J.C., L. Dengler, B. Uslu, C.E. Synolakis (2006) "Numerical Modeling of Tsunamis Effects at Marine Oil Terminals in San Francisco Bay", Prepared for California State Lands Commission, Marine Facilities Division, http://www.slc.ca.gov/division_pages/MFD/MOTEMS.html June 2006.

Mead, S. T., Black, K. P., J. C. **Borrero**, J. Frazerhurst, D. Anderson, D. J. Phillips and M. Kramer, 2006. *St Francis Bay Beach Project: Feasibility Study*. Prepared for the St Francis Bay Beach Reef Trust, May 2006.

2003

Legg, M.R., **J.C. Borrero**, C.E. Synolakis (2003) Evaluate Tsunami Risk to Southern California Coastal Cities, 2002 EERI/FEMA NEHRP Professional Fellowship. Submitted January 2003.

2002

Borrero, J.C., Cho, S., Gordon, S., Moore, J., Richardson, H.W. and Synolakis, C.E. (2002) "Natural Disasters and California: The Regional Economic Cost of a Tsunami Wave Generated by the Palos Verdes Slide," Final Report to the USC Zumberge Research and Innovation Fund, August, 2002.

2001

Borrero, J.C. (2001, 2002) "Pratte's Reef Quarterly Monitoring Reports", 2001 and 2002. 8 reports Prepared for The Surfrider Foundation, San Clemente, CA. September 2001 – October 2002.

PEER REVIEWED PUBLICATIONS IN RESEARCH JOURNALS

2017

Lane, E., Borrero, J., Whitaker, C., Bind, J., Chagué-Goff, C., Goff, J., Goring, D., Hoyle, J., Mueller, C., Power, W., Reid, C., Williams, J. and Williams, S. (2017) Effects of inundation by the 14th November, 2016 Kaikōura tsunami on Banks Peninsula, Canterbury, New Zealand, *Pure and Applied Geophysics*, DOI 10.1007/s00024-017-1534-x

Power, W., Clark, K., Ngaru-King, D., Howarth, J., Borrero, J., Lane, E., Goff, J., Chague-Goff, C., Williams, J., Reid, C., Whittaker, C., Mueller, C., Williams, S., Goring, D., Hughes, M., Hoyle, J., Bind, J., Strong, D., Lichtfield, N., and Benson, A. (2017) , Tsunami runup observations from the 14 November 2016 M7.8 Kaikōura earthquake, New Zealand, *Pure and Applied Geophysics*, DOI 10.1007/s00024-017-1566-2.

2016

Borrero J. C., M. Clarke, R. Klaus, S. T. Mead and S. Persand. Design and Assessment of Climate Change Adaptation and Erosion Control Measures for Mon Choisy Beach, Republic of Mauritius. *Proceedings 13th International Coral Reef Symposium*, Honolulu, Hawaii, 20-25 June 2016.

2015

Borrero, J.C., Lynett, P.J. and Kalligeris, N. (2015) Tsunami Currents in Ports, *Philosophical Transactions of the Royal Society A* ,373: 20140372. <http://dx.doi.org/10.1098/rsta.2014.0372>

Borrero, J.C., Goring, D.G. (2015) South American Tsunamis in Lyttelton Harbor, New Zealand, *Pure and Applied Geophysics*, 10.1007/s00024-014-1026-1

Mead, S. T., J. C. **Borrero**, E. Atkin and D. J. Phillips, 2015. Application of Climate Change Adaptation, Resilience, and Beach Management Strategies on Coral Islands. *Proceedings of the 22th Australasian Coasts and Ports Conference*, Auckland, New Zealand, 15-18 September 2015.

2014

Borrero, J.C., Goring, D.G., Greer, S.D. and Power, W.L. (2014) Tsunami Hazards in New Zealand Ports, *Pure and Applied Geophysics*, 10.1007/s00024-014-0987-4

Erikson, M., Lebreton, L., Carson, H., Thiel, M., Moore, C., **Borrero, J.C.**, Galgani, F., Ryan, P. and Reisser, J. (2014) Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea, *PLoS ONE* 9(12): e111913. doi:10.1371/ journal.pone.0111913.

Lynett, P.J., **Borrero, J.C.**, Son, S., Wilson, R.W. and Miller, K. (2014) Assessment of the tsunami-induced current hazard, *Geophysical Research Letters*, DOI: 10.1002/2013GL058680

Borrero, J.C., Kalligeris, N., Lynett, P.J., Fritz, H.M., Newman, A.V. and Convers, J.A. (2014) Observations and Modeling of the August 27, 2012 Earthquake and Tsunami affecting El Salvador and Nicaragua, *Pure and Applied Geophysics*, DOI 10.1007/s00024-014-0782-2

Admire, A. R., Dengler, L., Crawford, G., Uslu, B., **Borrero, J.C.**, Greer, S. and Wilson, R. (2014) Observed and Modeled Currents from the Tohoku-oki, Japan and other Recent Tsunamis in Northern California, *Pure and Applied Geophysics*, 10.1007/s00024-014-0797-8.

C. Vetger, M. Barletta, C. Beck, **J. Borrero**, H. Burton, M. L. Campbell, M. F. Costa, M. Eriksen, C. Eriksson, A. Estrades, K. V. K. Gilardi, B. D. Hardesty, J. A. Ivar do Sul, J. L. Lavers, B. Lazar, L. Lebreton, W. J. Nichols, C. A. Ribic, P. G. Ryan, Q. A. Schuyler, S. D. A. Smith, H. Takada, K. A. Townsend, C. C. C. Wabnitz, C. Wilcox, L. C. Young, M. Hamann (2014) Global research priorities for the management and mitigation of plastic pollution on marine wildlife, *Endangered Species Research*, 25 (p. 225-247), doi: 10.3354/esr00623.

2013

- Borrero, J.C.**, Titov, V.V. and Synolakis, C.E. (2013) Numerical Modeling of Tsunami Effects in Southern California from a Hypothetical M9.1 Earthquake near the Alaska Peninsula, in Ross, S.L., and Jones, L.M., eds., The SAFRR (Science Application for Risk Reduction) Tsunami Scenario: U.S. Geological Survey Open-File Report 2013–1170, 136 p., <http://pubs.usgs.gov/of/2013/1170/d/>.
- Lebreton, L. C.-M. and **Borrero, J.C.** (2013) Modeling the transport and accumulation floating debris generated by the 11 March 2011 Tohoku-oki tsunami, *Marine Pollution Bulletin*, 66, 53-58 DOI 10.1016/j.marpolbul.2012.11.013
- Borrero, J.**, Bell, R., Csato, C., DeLange, W., Greer, D., Goring, D., Pickett, V. and Power, W. (2013). Observations, Effects and Real Time Assessment of the March 11, 2011 Tohoku-oki Tsunami in New Zealand, *Pure and Applied Geophys.*, 170, 1229-1248, DOI 10.1007/s00024-012-0492-6
- Borrero, J.** and Greer, S.D. (2013) Comparison of the 2010 Chile and 2010 Japan tsunamis in the Far-field, *Pure and Applied Geophysics*, 170, 1249-1274, DOI 10.1007/s00024-012-0559-4.
- Atkin, E. A., J. C. **Borrero** and S. T. Mead, 2013. Morphological Response to a Multi-Purpose Reef. *Journal of Coastal Engineering*, (Submitted).

2012

- Wilson, R., Admire, A., **Borrero, J.**, Dengler, L., Legg, M., Lynett, P., McCrink, T., Miller, K., Ritchie, A., Sterling, K., and Whitmore, P. (2012) Observations and Impacts from the 2010 Chilean and 2011 Japanese Tsunamis in California (USA), *Pure and Applied Geophysics*, DOI 10.1007/s00024-012-0527-z.
- Hill, E, **Borrero, J.**, Huang, Z., Qiu, Q., Banerjee, P., Natawidjaja, D., Elosegui, P., Fritz, H., Pranantyo, I., Li, L., Macpherson, K., Skanavis, V., Synolakis, C., and Sieh, K. (2012) The 2010 Mw 7.8 Mentawai earthquake: Very shallow source of a rare tsunami earthquake determined from tsunami field survey and near-field GPS. *Journal of Geophysical Research*, Vol 117, B06402, doi:10.1029/2012JB009159.
- Lebreton, L.C.-M., Greer, S.D. and **Borrero J.**, (2012) Numerical modelling of floating debris in the world's oceans, *Marine Pollution Bulletin* 64, 653–661.
- Lynett, P., **Borrero, J.**, Weiss, R., Son, S., Greer, D., Renteria, W. (2012) Observations and Modeling of Tsunami-Induced Currents in Ports and Harbors, *Earth and Planetary Science Letters*, 327-328 (68-74).

2011

- Okal, E.A. and **Borrero, J.C.** (2011) The "tsunami earthquake" of 22 June 1932 in Manzanillo, Mexico: Seismological study and tsunami simulations, *Geophysical Journal International*, 187, 1443–1459.
- Fritz, H.M., **Borrero, J.C.**, Synolakis, C.E., Okal, E.A., Weiss, R., Titov, V., Jaffee, B., Foteinis, S., Lynett, P., Chan, I., and Liu, P.L-F (2011) Insights on the 2009 South Pacific Tsunami in Samoa and Tonga from Field Surveys and Numerical Simulations, *Earth Sci. Revs.*, 107, 66–75.
- Okal, E.A., **J.C. Borrero**, and C. Chagué-Goff (2011) Tsunamigenic predecessors to the 2009 Samoa earthquake, *Earth Sci. Revs.*, 107, 128 – 140.
- Prasetya, G., **Borrero, J.**, de Lange, W., Black, K., and Healy, T., Modelling of inundation on Banda Aceh, Indonesia during the great Sumatra tsunamis December 26, 2004. (2011) *Natural Hazards*, DOI 10.1007/s11069-010-9710-7.
- Barberopoulou, A., **Borrero, J.C.**, Uslu, B., Legg, M. and Synolakis, C.E. (2011) A Second Generation of Tsunami Inundation Maps for the State of California, *Pure and Applied Geophysics*, DOI10.1007/s00024-011-0293-3
- Prasetya, G., Black, K., de Lange, W., **Borrero, J.** Healy, T. (2011) Debris dispersal modeling for the great Sumatra Tsunamis on Banda Aceh and surrounding waters *Natural Hazards* DOI 10.1007/s11069-011-9903-8
- Mead, S. T., and J. C. **Borrero**, 2011. Multi-Purpose Reefs – A Decade of Applications. *Proceedings of the 20th Australasian Coasts and Ports Conference*, Perth, Australia, 27-30 September 2011.

2010

- Okal, E.A., Fritz, H.M., Synolakis, C.E., **Borrero, J.C.**, Weiss, R., Lynett, P., Titov, V.V., Foteinis, S., Jaffe, B.E., Liu, P. L-F and Chan, I-c., Field Survey of the Samoa Tsunami of 29 September 2009, *Seismological Research Letters* 81(4): 577-591
- Borrero, J.C.**, McAdoo, B., Jaffe, B., Dengler, L., Gelfenbaum, G., Higman, B., Hidayat, R., Moore, A., Kongko, W., Lukijanto, Peters, R., Prasetya, G., Titov, V., Yulianto, E. (2010) Field Survey of the March

28, 2005 Nias-Simeulue Earthquake and Tsunami, *Pure and Applied Geophysics* DOI 10.1007/s00024-010-0218-6.

Mead S.T., C. Blenkinsopp, J. C. **Borrero** and A. Moores, 2010. Design and Construction of the Boscombe Multi-Purpose Reef. Proceedings of 32nd International Conference on Coastal Engineering. Shanghai, China, June 30 – July 5, 2010.

2009

Borrero, J.C., Weiss, R., Okal, E., Hidayat, R., Suranto, Arcas, D., and Titov, V.V., (2009), The Tsunami of September 12, 2007, Bengkulu Province, Sumatra, Indonesia: Post-Tsunami Field Survey and Numerical Modeling, *Geophysical Journal International*, Vol 178, p. 180–194 doi: 10.1111/j.1365-246X.2008.04058.x

Barberopoulou, A., **Borrero, J.C.**, Kalligeris, N., Goltz, J.D., Wilson, R.I. and Synolakis, C.E. (2009) Unprecedented coverage of the Californian coast promises improved tsunami preparedness. *Eos, Transactions of the American Geophysical Union*, Vol.90, No. 16, p. 137-138.

2008

Dengler, L.A., Uslu, B., Barberopoulou, A., **Borrero, J.C.**, and Synolakis, C. (2008). The Vulnerability of crescent city, California, to Tsunamis Generated by Earthquakes in the Kuril Islands Region of the Northwestern Pacific, *Seismological Research Letters*, Vol. 79, No. 5, September/October, 2008, 608 – 619.

Fritz, H. M., Kalligeris, N., **Borrero, J.C.**, Broncano, P., and Ortega, E. (2008). 15 August 2007 Peru tsunami runup observations and modeling, *Geophysical Research Letters*, Vol. 35, L10604, doi:10.1029/2008GL033494, 2008.

2007

Uslu, B., **Borrero, J.C.**, Dengler, L., and Synolakis, C.E. (2007). Tsunami Inundation at Crescent City, California generated by earthquakes on the Cascadia Subduction Zone. *Geophysical Research Letters*, Vol. 34, L20601.

Mead, S.T., **Borrero, J.C.**, Black, K.P., Anderson, K. (2007). Multi-Faceted Beach Management at St. Francis Bay Beach, South Africa, *Shore and Beach*, V 75 (4): 43 – 54.

B.G McAdoo, Richardson N., and **Borrero J.C.** (2007). Inundation distances and run-up measurements from ASTER, QuickBird and SRTM data, Aceh coast, Indonesia. *International Journal of Remote Sensing* V28, No. 13-14, July 2007.

Satake, K., E.A. Okal, and **J.C. Borrero** (2007), Tsunami and its hazard in the Indian and Pacific Oceans: Introduction to the topical issue, *Pure Appl. Geophys.*, 164, 249-259, 2007.

2006

Borrero, J., Sieh, K., Chlieh, M. and Synolakis, C.E. (2006), Tsunami Inundation Modeling for Western Sumatra, *Proceedings of the National Academy of Science*, V. 103, No. 52, p. 19673 – 19677.

Okal, E., **Borrero, J.** and Synolakis, C. (2006) Evaluation of Tsunami Risk from Regional Earthquakes at Pisco, Peru. *Bulletin of the Seismological Society of America* 96, 1634-1648.

Borrero, J.C., C.E. Synolakis, H.M Fritz (2006) Northern Sumatra Field Survey after the December 2004 Great Sumatra Earthquake and Indian Ocean Tsunami, *Earthquake Spectra*, V 22, S3, June 2006, S93 – S104.

Jaffe, B. **Borrero, J.**, Prasetya, G. Peters, R. McAdoo, B., Gelfenbaum, G., Morton, R. Ruggiero, P. Higman, B., Dengler, L., Hidayat, R., Kingsley, E., Kongko, W., Lukijanto, Moore, A. (2006) Northwest Sumatra and Offshore Islands Field Survey after the December 2004 Indian Ocean Tsunami, *Earthquake Spectra*, V 22, S3, June 2006, S105 – S135.

H.M. Fritz and **J.C. Borrero** (2006) Somalia Field Survey after the December 2004 Indian Ocean Tsunami, *Earthquake Spectra*, V 22, S3, June 2006, S219 – S233.

Fritz, H. M., **J. C. Borrero**, C. E. Synolakis, and J. Yoo (2006), 2004 Indian Ocean tsunami flow velocity measurements from survivor videos, *Geophys. Res. Lett.*, 33, L24605, doi:10.1029/2006GL026784.

2005

- Borrero, J.C.** (2005). Field Data and Satellite Imagery of Tsunami Effects in Banda Aceh, *Science*, V. 308, p. June 10, 2005.
- Borrero, J.C.** (2005). Field Survey of Northern Sumatra and Banda Aceh, Indonesia after the Tsunami and Earthquake of 26 December 2004, *Seismological Research Letters* V. 74, No. 3, 309 – 317, May/June 2005.
- Liu, P. L.-F. and Wu, T.-R. and Raichlen, F. and Synolakis, C. E. and **Borrero, J. C.** (2005) Runup and rundown generated by three-dimensional sliding masses. *Journal of Fluid Mechanics*, 536 (1). pp. 107-144. ISSN 0022-1120.

2004

- Borrero, J.C.**, Legg, M.R., and Synolakis (2004). C.E., Nearshore Tsunami Sources in Southern California, *Geophysical Research Letters*. Vol 31, July 2004.
- Legg, M.R., **J.C. Borrero**, C.E. Synolakis (2004). Tsunami Hazards from the Catalina Fault Offshore Southern California, *Earthquake Spectra*, Vol. 20, No. 3, p. 917 – 950, August 2004.
- Okal, E.A., **J.C. Borrero**, and C.E. Synolakis (2004). The earthquake and tsunami of 17 November 1865: Evidence for farfield tsunami hazard from Tonga. *Geology and Geophysics International*, V.157, 164-174, 2004.

2003

- Lynett, P.J., **J.C. Borrero**, P.L.-F. Liu, and C.E. Synolakis (2003). Field Survey and Numerical Simulations: A Review of the 1998 Papua New Guinea Earthquake and Tsunami. *Pure and Applied Geophysics*, V. 160, no. 10-11, pp. 2119 – 2146, October 2003.
- Borrero, J.C.**, J. Bu, C. Saiang, B. Uslu, J. Freckman, B. Gomer, E.A. Okal, and C.E. Synolakis (2003). Field survey and preliminary modeling of the Wewak, Papua New Guinea earthquake and tsunami of September 9, 2002, *Seismological Research Letters*, V. 74, No.4, pp.393 – 405, July/August 2003.
- Okal, E.A., G. Plafker, C.E. Synolakis, and **J.C. Borrero** (2003). Near-field survey of the 1946 Aleutian tsunami on Unimak and Sanak Islands, *Bull. Seismol. Soc. Amer.*, V. 93, No. 3, pp. 1226 – 1234, June 2003.

2002

- Okal, E.A., L. Dengler, S. Araya, **J.C. Borrero**, B. Gomer, S. Koshimura, G. Laos, D. Olcese, M. Ortiz, M. Swenson, V.V. Titov, and F. Vegas (2002), A field survey of the Camaná, Peru tsunami of June 23, 2001, *Seismological Research Letters*, 73, 904-917, 2002.
- Okal, E.A., C.E. Synolakis, G.J. Fryer, P. Heinrich, **J.C. Borrero**, C. Ruscher, D. Arcas, G. Guille, and D. Rousseau, A field survey of the 1946 Aleutian tsunami in the far field, *Seismological Research Letters*, 73, 490-503, 2002.
- Okal, E.A., G.J. Fryer, **J.C. Borrero**, and C. Ruscher (2002). The landslide and local tsunami of 13 September 1999 on Fatu-Hiva (Marquesas Islands; French Polynesia), *Bull. Soc. Géol. France*, 173, 359-367, 2002.
- Synolakis, C.E., J.-P. Bardet, **J.C. Borrero**, H.L. Davies, E.A. Okal, E.A. Silver, S. Sweet, and D.R. Tappin (2002). The slump origin of the 1998 Papua New Guinea tsunami, *Proceedings of the Royal Society (London)*, Ser. A, 458, 763-789, 2002.

2001

- Borrero, J.C.**, Dolan, J., Synolakis, C.E., (2001) Tsunami Sources Within the Eastern Santa Barbara Channel, *Geophysical Research Letters*, V. 28 (4), 643-647.

1999

- Kawata, Y., B. Benson, **J.C. Borrero**, J.L. Borrero, H.L. Davies, W.P. deLange, F. Imamura, H. Letz, J. Nott, and C.E. Synolakis (1999) Tsunami in Papua New Guinea was as Intense as First Thought, *Eos, Transactions of the American Geophysical Union*, Cover Article, V. 80, # 9, March 2, 1999.

1997

Borrero J.C., Titov, V., Ortiz, M. and Synolakis, C. E., (1997) Mexican Earthquake Generates Tsunami, New Data and Unusual Photos, *Eos, Transactions of the American Geophysical Union*, Cover Article, Vol. 78, # 8, Feb. 25, 1997.

PEER-REVIEWED FULL LENGTH CONFERENCE PAPERS AND BOOK CHAPTERS

2017

Borrero, J. (2017) Assessment of Tsunami Induced Currents in Indian Ocean Ports, Proceedings of Coasts and Ports Conference, Cairns, Australia, June, 2017

Mead S. T., and J. C. **Borrero**, 2017. *Chapter 16 -Surf Science and Multi-Purpose Reefs*. In: Marine and Coastal Resource Management: Principles and Practise. Eds D. Green and J. Payne. Routledge, 328 pg.

2015

Borrero, J.C., LeVeque, R.J., S. Dougal Greer, Sam O'Neill and Brisa N. Davis (2015) Observations and Modelling of Tsunami Currents at the Port of Tauranga, New Zealand, Proceedings of Coasts and Ports Conference, Auckland, New Zealand, September, 2015.

Rabinovich, A.B., Geist E.L., Fritz, H.M., and **Borrero, J.C.** (2015), Tsunami Science: Ten Years after the 2004 Indian Ocean Tsunami Volume I. Pure Appl. Geophys., 172 (3), Topical Issue.

2014

Rabinovich, A.B., **Borrero, J.C.** and Fritz, H.M. (2014), Tsunamis in the Pacific Ocean: 2010-2011. Pure Appl. Geophys., 171 (12), Topical Issue.

2013

Satake K., Rabinovich, A.B., Dominey-Howes, D., and **Borrero, J.C.** (2013a), Historical and Recent Catastrophic Tsunamis in the World: Past, Present, and Future. Volume I: The 2011 Tohoku Tsunami. Pure Appl. Geophys., 170 (6-8), Topical Issue.

Satake K., Rabinovich, A.B., Dominey-Howes, D., and **Borrero, J.C.** (2013b), Historical and Recent Catastrophic Tsunamis in the World: Past, Present, and Future. Volume II: Tsunamis from 1755 to 2010. Pure Appl. Geophys., 170 (9-10), Topical Issue.

Borrero, J.C., Goring, D.G., Greer, S.D., Power, W.L. and Barberopoulou, A. (2013) Understanding Tsunami Hazards in New Zealand Ports and Harbours, Proceedings of Coasts and Ports 2013, Manly, Australia, September 2013.

Porter, KA, L Jones, S Ross, J Borrero, J Bwarie, D Dykstra, EL Geist, L Johnson, S Kirby, K Long, P Lynett, K Miller, C Mortensen, S Perry, G Plumlee, C Real, L Ritchie, HK Thio, A Wein, P Whitmore, R Wilson, N Wood, 2013. USGS Science Application for Risk Reduction's Next Wave Tsunami Scenario. Paper 79, Proc COPRI Ports '13, Seattle Washington, Aug 25-29, 2013

Lynett, P., Borrero, J., Wilson, R. and Miller, K. (2013) Detailed Simulation of Tsunami-Induced Currents in California Ports and Harbors, Proc COPRI Ports '13, Seattle Washington, Aug 25-29, 2013

Borrero, J.C. (2013) Tsunami, in Encyclopedia of Marine Geosciences, Harff, J.; Meschede, M.; Petersen, S.; Thiede, J. (Eds.) 2015, 1000 p. 440 illus., 140 illus. in color (Due in 2015).

2011

Borrero, J.C., Greer, S.D., Lebreton, L. and Fritz, H.M. (2011) Field Surveys and Numerical Modelling of the 2009 South Pacific and 2010 Mentawai Islands Tsunamis, Proceedings of Coasts and Ports Conference, Perth, Australia, September 28-30, 2011.

Mead, S.T. and **Borrero, J.C.**, (2011), Multi-Purpose Reefs: A Decade of Applications Proceedings of Coasts and Ports Conference, Perth, Australia, September 28-30, 2011.

2010

Prasetya, G., **Borrero, J.C.**, (2010) Modelling a General Distribution of Suspended Materials and Flotsam Throughout the Affected Regions in Banda Aceh During the 26 December 2004 Tsunami Event, Proceedings of the *Indian Ocean Tsunami Modelling Symposium*, Fremantle, Australia, 12-15 October 2010.

Borrero, J.C., Mead, S.T., and Moores, A. (2010) Stability Considerations for Structures Constructed from Large, Sand Filled Geotextile Containers, *Proceedings of the 32nd International Conference on Coastal Engineering (ICCE)*, Shanghai, China, July 2010.

Mead, S.T., Bleinkinsopp, C., Moores, A., and **Borrero, J.C.** (2010) Design and Construction of the Boscombe Multipurpose Reef, *Proceedings of the 32nd International Conference on Coastal Engineering (ICCE)*, Shanghai, China, July 2010.

Mead, S.T., Black, K.P. and **Borrero, J.C.**, (2010) Design and Construction of the Boscombe Reef, *Proceedings of Coastal Structure, Institute of Civil Engineers Conference*, Edinburgh, Scotland, September 2009.

2009

Phillips, D., Mead, S., Harrison, S., Frazerhurst, J., Dodet, G., Klinginger, C., and **Borrero, J.**, (2009) Oceanography in the Public Interest: Tales from Raglan, *Proceedings of the 20th Australasian Port and Harbour Conference, Wellington New Zealand*

Harrison, S., **Borrero, J.**, Klinginger, C., Mead, S., Phillips, D. (2009) Hydrodynamic Modelling of Whaingaroa Harbour *Proceedings of the 20th Australasian Port and Harbour Conference, Wellington New Zealand*

2008

Uslu, B., **Borrero, J.C.**, Dengler, L., Synolakis, C., Barberopoulou, A. (2008). "Tsunami Inundation from Great Earthquakes on the Cascadia Subduction Zone Along the Northern California Coast" in: Wallendorf, L. (ed) *Solutions to Coastal Disasters 2008 Tsunamis: Proceedings of sessions of the conference, April 13– 16, 2008: Oahu, Hawaii*.

Chawla A., **Borrero, J.C.** and Titov, V.V. (2008) "Evaluating wave propagation and inundation model characteristics of the MOST tsunami model over a complex 3D beach" in Liu, P. L-F., Yeh, H. and Synolakis, C. (eds.) *Advanced Numerical Models for Simulating Tsunami Waves and Runup* World Scientific, 344 pages, 2008.

2007

Satake, K., Okal, E.A. and **Borrero, J.C.** (2007), Tsunami and its hazards in the Indian and Pacific oceans, *Pure Appl. Geophys.*, 164, Topical Issue.

J.C. Borrero, C. Bosserelle, G. Prasetya and K.P. Black (2007). "Using 3DD to model tsunami inundation" *Proceedings of Coasts and Ports 2007*.

J.C. Borrero, D. Goring, C. Bosserelle and K.P. Black (2007). "Observations and modelling of the May 4, 2006 Tonga tsunami in New Zealand", *Proceedings of Coasts and Ports 2007*

2006

Borrero, J.C., B. Uslu, C.E. Synolakis, and V.V. Titov (2006) Modeling Far-Field Tsunamis for California Ports and Harbors, *Proceedings of the 30th International Conference on Coastal Engineering*, San Diego, CA September 2006.

Synolakis, C.E., **Borrero, J.C.**, Fritz, H., Titov, V., Okal, E. (2006). Inundation During the 26 December 2004 Tsunami, *Proceedings of the 30th International Conference on Coastal Engineering*, San Diego, CA September 2006.

2005

J.C. Borrero, J. Moore, S. Cho, and C.E. Synolakis "Natural Disasters and California: The Regional Economic Cost of a Tsunami Wave Generated by the Palos Verdes Slide," *Infrastructure risk Management Processes: Natural, Accidental, and Deliberate Hazards*, ASCE Council on Disaster Risk Management Monograph No. 1, May, 2005, edited by Craig Taylor and Erik VanMarcke (2006): 67-94. Presented at the Workshop on Acceptable Risk Processes for Natural and Manmade Hazards Affecting Lifelines, American Society of Civil Engineers Technical Council on Lifeline Earthquake Engineering Sixth U.S. Conference and Workshop on Lifeline Earthquake Engineering, Long Beach, August 10-13, 2003; and the 2005 Annual ASCE Civil Engineering Conference Next Generation Infrastructure: Projects that Create the Future, Los Angeles, October 27- 29, 2005.

2004

Borrero J.C., A.C. Yalciner, U. Kanoglu, V. Titov, D. McCarthy, and C.E. Synolakis (2003) Producing Tsunami Inundation Maps: The California Experience. *Submarine Landslides and Tsunamis* Yalciner, Pelinovsky, Okal and Synolakis (eds), NATO Science Series IV: Earth and Environmental Sciences – Vol. 21, Kluwer Academic Press.

2003

Dengler, L., **J. Borrero**, G. Gelfenbaum, B. Jaffe, E. Okal, M. Ortiz, and V. Titov, Tsunami, in: Southern Peru earthquake of 23 June 2001, Reconnaissance Report, Edited by A. Rodriguez-Marek and C. Edwards, *Earthquake Spectra*, 19, Supp. A., 115-144, 2003.

Borrero, J.C. and Nelsen, C. (2003) Results of a comprehensive monitoring program at Pratte's Reef, Proceedings of the 3rd International Surfing Reef Symposium, Raglan New Zealand.

2002

Borrero, J.C. for the ITST, Field survey of the June 23, 2001 earthquake and tsunami in Southern Peru, in: *Solutions to Coastal Disasters '02*, Ed. By L. Ewing and L. Wallendorf Amer. Soc. Civil Eng., pp. 892 – 904, 2002.

Okal, E.A., **J.C. Borrero**, and C.E Synolakis, Solving the puzzle of the 1998 Papua New Guinea tsunami: The case for a slump, in: *Solutions to Coastal Disasters '02*, Ed. by L. Wallendorf and L. Ewing, Amer. Soc. Civil Eng., pp. 863-877, 2002.

2001

Changing field data gives better model results. An example from Papua New Guinea”, **Borrero, J.C.**, Presentation, International Tsunami Symposium, August 8-9, 2001, Seattle, WA

Yalçiner, A. C., Synolakis, C. E., Alpar, B., **Borrero, J. C.**, Altinok, Y., Imamura, F., Tinti, S., Ersoy, S., Kuran, U., Pamukcu, S. and Kanoglu, U., (2001). Field Surveys and Modeling of the 1999 Izmit tsunami, Proceedings of the International Tsunami Symposium, August 8-9, 2001, Seattle, WA.

1997

Synolakis, C.E., D. McCarthy, V.V. Titov, **J.C. Borrero**, Evaluating the Tsunami Risk in California, in: *California and the World Oceans '97*, Amer. Soc. Civil Eng.

FIELD STUDIES AND DATA COLLECTION

Instrument Deployment, Retrieval and Bathymetric Surveys – February, 2019, Lelepa Island, Vanuatu.

Tsunami Field Survey – Team member, reconnaissance survey of the December, 2018 Krakatoa, Indonesia Volcanic eruption, landslide and tsunami.

Tsunami Field Survey – Team member, reconnaissance survey of the November, 2016 Earthquake and tsunami in New Zealand (November 2016).

Instrument Deployment, Retrieval and Site Surveys –North East Point, Mahe Island, Seychelles (January, 2016, September 2016).

Instrument Deployment, Retrieval and Bathymetric Surveys – Mon Choisy and Rivere des Galets, Mauritius. Programming and deployment of Aquadopp current meters and pressure sensors (September, 2014).

Tsunami Field Survey – Team leader, reconnaissance survey of the August, 2012 Earthquake and tsunami in the El Salvador.

Tsunami Field Survey – Team leader, reconnaissance survey of the October 25, 2010 Earthquake and tsunami in the Mentawai Islands, Sumatra, Indonesia.

Tsunami Field Survey of the September 2009 Earthquake and Tsunami in Samoa and American Samoa (September 2009).

Instrument Deployment – Uitoe, New Caledonia. Programming and deployment of Aquadopp current meters and pressure sensors (January, 2009).

Field Data Collection – Orewa, New Zealand. Deployment and retrieval of surf-zone sled for surf zone current velocity measurements (February 2008).

Tsunami Field Survey of the September 2007 Earthquake and Tsunami in Bengkulu, Sumatra, Indonesia (September 2007).

Instrument Retrieval – Chamela Bay, Mexico. SCUBA retrieval of Aquadopp Current meter and frame (March, 2007).

Tsunami Field Survey of the March 28, 2005 Earthquake and Tsunami in Nias, Sumatra, Indonesia (April 2005).

Tsunami Field Survey of the December 26, 2004 Earthquake and Tsunami in Aceh, Sumatra, Indonesia. Includes extensive surveys of Banda Aceh (January 2005, March 2005, April 2005)

Tsunami Field Survey of the December 26, 2004 Earthquake and Tsunami Along the Northeast Coast of Somalia (March 2005).

Field Survey of tsunami deposits from the September 1992 Nicaraguan tsunami (March 2003).

Tsunami field survey – Leader of the International Tsunami Survey Team (ITST) after the September 9, 2002 earthquake and tsunami in Wewak Papua New Guinea (September 2002).

Tsunami field survey – Member of the International Tsunami Survey Team (ITST) after the June, 2001 Tsunami in Camaná, Peru (June 2001).

Bathymetric Surveying and Monitoring – Regular profiling and collection of high-resolution bathymetry offshore of Dockweiler State Beach, El Segundo, CA. Project is in conjunction with the construction of an artificial surfing reef (2001/2002).

Tsunami field survey – Member of the International Tsunami Survey Team (ITST) after the September, 1999 Tsunami on Fatu Hiva Island in French Polynesia.

Tsunami field survey - Joined the ITST after the August, 1999 Izmit Bay, Turkey Earthquake and Tsunami.

Tsunami field survey - Joined the ITST after the July 17,1998 Papua New Guinea Tsunami and Earthquake.

Tsunami field survey - Joined the ITST after the February 17,1996 Biak, Irian Jaya, Indonesia Tsunami.

Tsunami field survey - Led USC's expedition to Manzanillo Mexico after tsunami and earthquake of October 1995.

Field Investigation - Participated in a joint USC/ US Army Corps of Engineers survey to Nicaragua to perform detailed mapping of nearshore bathymetry for use in numerical models, March 1995.

Technical Advisory Committee – Junior member of advisory committee overseeing design and construction of Pratte's Reef, America's first artificial surfing reef, El Segundo, California (1999-2000).

EXPERT EVIDENCE

Mead S. T., J. C. **Borrero** and J. Frazerhurst, 2009. *Expert Review of Weather and Sea Conditions Leading up to the Grounding of the San Cuvier, 27th July 2008*. Prepared for Legal proceedings following the grounding, October 2009.